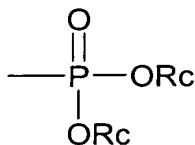


wherein B is cytosine or 5-fluorocytosine and R is selected from the group comprising H, monophosphate, diphosphate, triphosphate, carbonyl substituted with a C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl, C<sub>2-6</sub> alkynyl, C<sub>6-10</sub> aryl, and

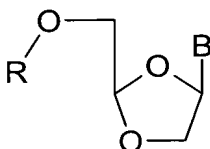


wherein each Rc is independently selected from the group comprising H, C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl, C<sub>2-6</sub> alkynyl and hydroxy protecting groups, and wherein said compound is substantially in the form of the (-) enantiomer; and

administering doxorubicin to a patient

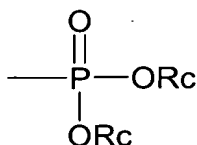
**Please add the following new claims as follows:**

22. A method for treating leukemia in a host comprising administering to the host having leukemia a therapeutically effective amount of at least one compound of general formula I



(I)

wherein B is cytosine or 5-fluorocytosine and R is selected from the group comprising H, monophosphate, diphosphate, triphosphate, carbonyl substituted with a C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl, C<sub>2-6</sub> alkynyl, C<sub>6-10</sub> aryl, and



wherein each R<sub>c</sub> is independently selected from H, C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl, C<sub>2-6</sub> alkynyl and hydroxy protecting groups, and wherein said compound is substantially in the form of the (-) enantiomer; and

also administering to said patient a chemotherapeutic agent selected from Asparaginase, Bleomycin, Busulfan, Carmustine, Chlorambucil, Cladribine, Cyclophosphamide, Cytarabine, Dacarbazine, Daunorubicin, Doxorubicin, Etoposide, Fludarabine, Gemcitabine, Hydroxyurea, Idarubicin, Ifosfamide, Lomustine, Mechlorethamine, Melphalan, Mercaptopurine, Methotrexate, Mitomycin, Mitoxantrone, Pentostatin, Procarbazine, 6-Thioguanine, Topotecan, Vinblastine, Vincristine, Dexamethasone, Retinoic acid and Prednisone.

23. A method according to claim 22, wherein said at least one chemotherapeutic agent is Cytarabine.

24. A method according to claim 22, wherein said at least one chemotherapeutic agent is Idarubicin.

25. A method according to claim 22, wherein said at least one chemotherapeutic agent is Gemcitabine.

26. The method according to claim 22, wherein the leukemia is chronic myelogenous leukemia.

27. The method according to claim 22, wherein the leukemia is acute myelogenous leukemia.

28. The method according to claim 22, further comprising the step of administering a multidrug resistance reversing agent or a biological response modifier.

29. The method according to claim 28, wherein the multidrug resistance agent is PSC 833.

30. The method according to claim 28, wherein the biological response modifiers are selected from the group consisting of monoclonal antibodies and cytokines.

31. The method according to claim 28, wherein the cytokines are selected from the group consisting of interferons, interleukins and colony-stimulating factors.

32. The method according to claim 28, wherein the biological response modifiers are selected from the group consisting of Rituxan, CMA-676, Interferon-alpha recombinant, Interleukin-2, Interleukin-3, Erythropoietin, Epoetin, G-CSF, GM-CSF, Filgrastim, Sargramostim and Thrombopoietin.

33. A method according to claim 22, wherein the compound of formula I and the at least one chemotherapeutic agent are administered sequentially.

34. A method according to claim 22, wherein the compound of formula I and the at least one chemotherapeutic agent are administered simultaneously.

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